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SHEEP LOSSES DUE TO PREDATORS AND OTHER CAUSES IN THE WESTERN UNITED STATES, 1974

A Preliminary Report

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Coyotes are a major cause of sheep loss in the western United States. This preliminary report features data on death losses gathered as part of a USDA project funded by Congress to make a comprehensive analysis of the sheep-predator issue, including the economic, environmental, and social impacts of alternative predator control policies. The analysis will be reported in 1976.

More than 6 percent of the docked lambs and about 2.5 percent of the stock sheep in the West were lost to coyotes in 1974, according to sheep producers in 15 western States. These losses to coyotes accounted for more than half a million docked lambs and a quarter million stock sheep.

The loss estimates are based upon reports from about 9,000 producers surveyed in January 1975 by the Statistical Reporting Service in cooperation with the Economic Research Service. Each surveyed producer reported his sheep inventory and lamb crop, and estimated his losses of sheep and lambs to various causes such as weather, disease, coyotes, and other predators.

Coyotes Are Leading Cause of Lamb Deaths

In the 15 western States, 940,000 lambs or about 12 percent of those docked were lost to all causes. Coyotes were by far the largest estimated cause of lamb loss, accounting for more than half of the total losses after docking:

<u>Cause of loss</u>	<u>Lambs lost after docking</u>	<u>Percentage of all docked lambs</u>
	<u>1,000 head</u>	<u>Percent</u>
Coyotes	503	6.4
Other predators	133	1.7
Other causes	<u>304</u>	<u>3.9</u>
Total, all causes	940	12.0

Surveyed producers also estimated losses of lambs to various causes during the period between birth and docking. Total losses to all causes during the before-docking period were 1.1 million, or slightly higher than the 940,000 lost after docking. Adding losses to all causes during the two periods, there were more than 2 million lambs lost, or nearly one-fourth of all lambs born in the 15 western States.

Losses attributed to coyotes in the before-docking period were substantial--more than 2.5 percent of lambs born--but only about a third as large as losses to other non-predator causes, including unfavorable weather and disease. When these coyote-attributed losses before docking were added to after-docking losses, the combined loss to coyotes totaled 735,000 lambs, more than 8 percent of lambs born and more than one-third of the losses to all causes.

Total lamb losses to all causes varied widely among States (see table 1). The number of docked lambs lost was highest in Texas and Wyoming because of the large lamb crops in these States. The highest percentage losses occurred in New Mexico and Montana, both with over 20 percent. States with 15 to 20 percent losses were Colorado, Nevada, and Utah. Lowest percentage losses were in Kansas, North Dakota, Nebraska, and South Dakota.

In 9 of the 15 States, coyote-attributed losses accounted for more than half of total lamb losses after docking. States with the highest percentage lamb losses to coyotes were Colorado, Montana, and Nevada, all with over 13 percent of lambs docked. States with 9-10 percent losses were Utah and New Mexico. The lowest percentage losses of docked lambs to coyotes were reported in Nebraska, Kansas, South Dakota, and North Dakota.

Coyotes Are Second Major Cause of Stock Sheep Losses

The survey indicated that about 950,000 head or 10.4 percent of the stock sheep inventory in the 15-State region were lost to all causes in 1974. Losses to coyotes were 2.5 percent of the inventory, compared with 7 percent lost to nonpredator causes combined:

<u>Cause of loss</u>	<u>Number lost</u>	<u>Percentage of</u>
	<u>1,000 head</u>	<u>all stock sheep</u>
		<u>Percent</u>
Coyotes	230	2.5
Other predators	86	.9
Other causes	<u>634</u>	<u>7.0</u>
Total, all causes	950	10.4

Losses of stock sheep varied widely among the 15 western States (see table 2). The number of head lost was greatest in Texas and Wyoming because of large sheep inventories in these States. The highest percentage losses to all causes occurred in New Mexico, Montana, Nevada, Wyoming, and Oregon, with 12-16 percent of stock sheep lost. Percentage losses were lowest in South Dakota, Arizona, California, Idaho, Kansas, and Texas.

Percentage losses of stock sheep attributed to coyotes were particularly high in Nevada (over 11 percent), followed by Montana, Utah, and Colorado (4-5 percent). Losses to coyotes were under 2 percent in South Dakota, Arizona, Nebraska, North Dakota, California, and Idaho.

Table 1--Lamb losses to various causes after docking, 15 western States, 1974 estimates

State	Lambs docked	Cause of loss			
		Coyotes	Other	Other	All
			predators	causes	causes
Thousands					
Arizona	232	13.9	4.8	5.3	24.0
California	750	28.0	19.1	24.9	72.0
Colorado	542	75.9	6.8	22.3	105.0
Idaho	645	32.7	3.2	24.1	60.0
Kansas	1/166	3.5	0.2	2.6	6.3
Montana	537	73.3	12.4	29.3	115.0
Nebraska	1/144	1.9	0.2	7.0	9.1
Nevada	125	17.0	1.5	2.5	21.0
New Mexico	395	36.5	17.3	32.2	86.0
North Dakota	1/231	7.1	0.8	4.4	12.3
Oregon	323	18.0	8.6	13.4	40.0
South Dakota	1/741	15.3	4.4	26.6	46.3
Texas	1,500	54.3	34.6	46.1	135.0
Utah	578	57.5	5.7	24.8	88.0
Wyoming	892	68.6	13.1	38.3	120.0
Total 15 States	7,801	503.5	132.7	303.8	940.0
Percent of docked lambs					
Arizona	100	6.0	2.0	2.3	10.3
California	100	3.7	2.5	3.4	9.6
Colorado	100	14.0	1.3	4.1	19.4
Idaho	100	5.1	0.5	3.7	9.3
Kansas	100	2.1	0.1	1.6	3.8
Montana	100	13.7	2.3	5.4	21.4
Nebraska	100	1.3	0.1	4.9	6.3
Nevada	100	13.6	1.2	2.0	16.8
New Mexico	100	9.2	4.4	8.1	21.7
North Dakota	100	3.1	0.3	1.9	5.3
Oregon	100	5.6	2.7	4.1	12.4
South Dakota	100	2.0	0.6	3.6	6.2
Texas	100	3.6	2.3	3.1	9.0
Utah	100	10.0	1.0	4.2	15.2
Wyoming	100	7.7	1.5	4.3	13.5
Total 15 States	100	6.4	1.7	3.9	12.0

1/ Differs from reported lamb crop by number of lambs lost before docking.

Table 2--Stock sheep losses to various causes, 15 western States, 1974 estimates

State	: Stock sheep : : inventory, : : Jan. 1, 1975 :	Cause of loss			
		: Coyotes :	: Other : : predators :	: Other : : causes :	: All : : causes :
			Thousands		
Arizona	: 311	1.7	2.5	21.8	26.0
California	: 874	13.3	10.0	46.7	70.0
Colorado	: 546	20.5	7.4	32.1	60.0
Idaho	: 560	10.2	1.2	35.6	47.0
Kansas	: 174	5.9	0.7	8.4	15.0
Montana	: 576	30.9	3.9	50.2	85.0
Nebraska	: 162	1.5	0.1	17.4	19.0
Nevada	: 132	15.3	0.1	2.6	18.0
New Mexico	: 499	13.8	15.6	50.6	80.0
North Dakota	: 222	2.4	0.6	22.0	25.0
Oregon	: 321	6.5	12.9	20.6	40.0
South Dakota	: 727	1.8	1.3	51.9	55.0
Texas	: 2,241	48.2	16.6	135.2	200.0
Utah	: 634	26.5	6.5	39.0	72.0
Wyoming	: 1,089	31.9	6.1	100.0	138.0
Total 15 States	: 9,068	230.4	85.5	634.1	950.0
		Percent of stock sheep			
Arizona	: 100	.6	.8	7.0	8.4
California	: 100	1.5	1.2	5.3	8.0
Colorado	: 100	3.8	1.3	5.9	11.0
Idaho	: 100	1.8	.2	6.4	8.4
Kansas	: 100	3.4	.4	4.8	8.6
Montana	: 100	5.3	.7	8.7	14.7
Nebraska	: 100	.9	.1	10.7	11.7
Nevada	: 100	11.6	.1	1.9	13.6
New Mexico	: 100	2.8	3.1	10.1	16.0
North Dakota	: 100	1.1	.3	9.9	11.3
Oregon	: 100	2.0	4.0	6.5	12.5
South Dakota	: 100	.2	.2	7.1	7.5
Texas	: 100	2.2	.7	6.0	8.9
Utah	: 100	4.2	1.0	6.2	11.4
Wyoming	: 100	2.9	.6	9.2	12.7
Total 15 States	: 100	2.5	.9	7.0	10.4

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